

Bibliography supporting 404(c) action

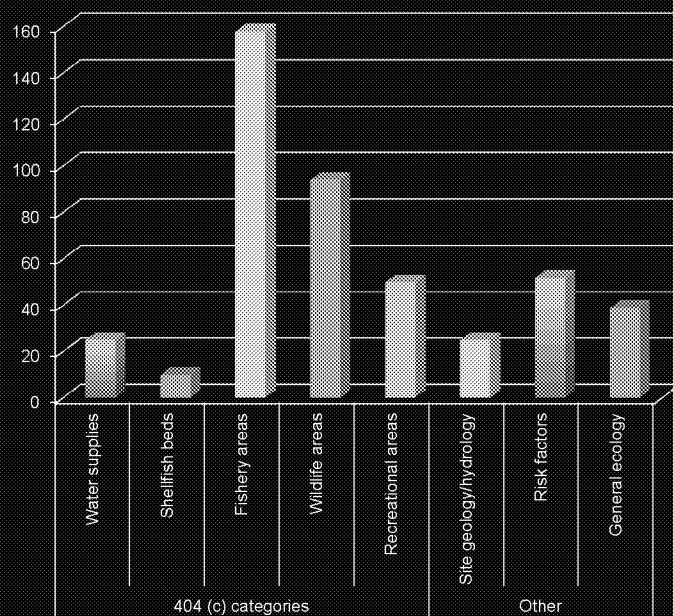
Sarah O'Neal and Carol Ann Woody

Fisheries Research and Consulting

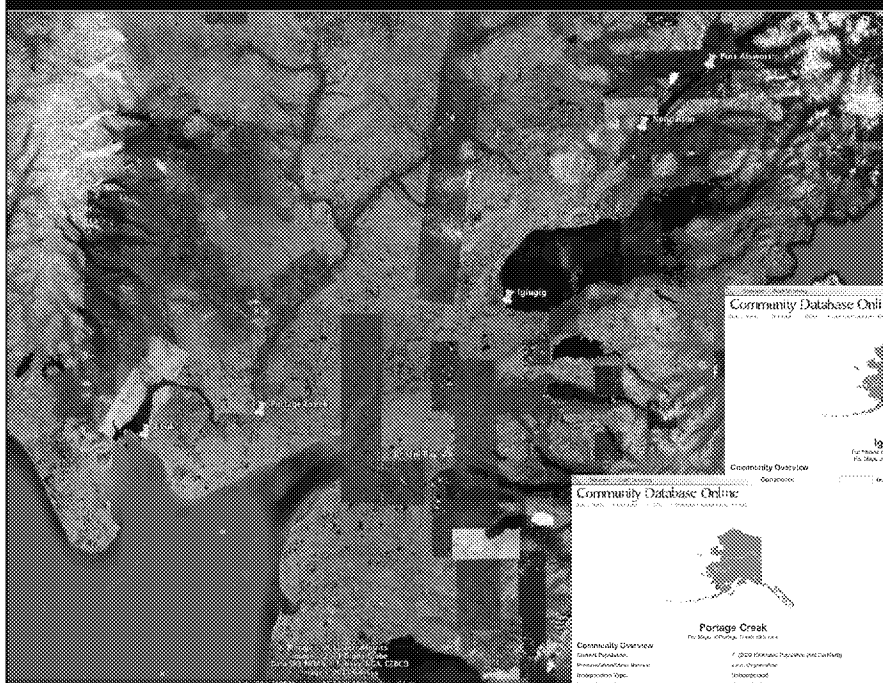
January 27, 2011



Bibliography Categories



Municipal Water Supplies



Community Database Online
 The Public Information System
 for Alaska's Municipalities

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Geography Overview
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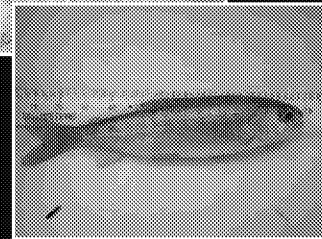
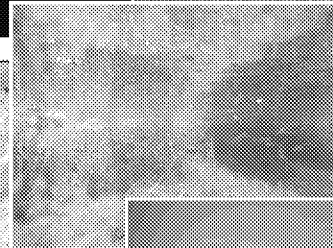
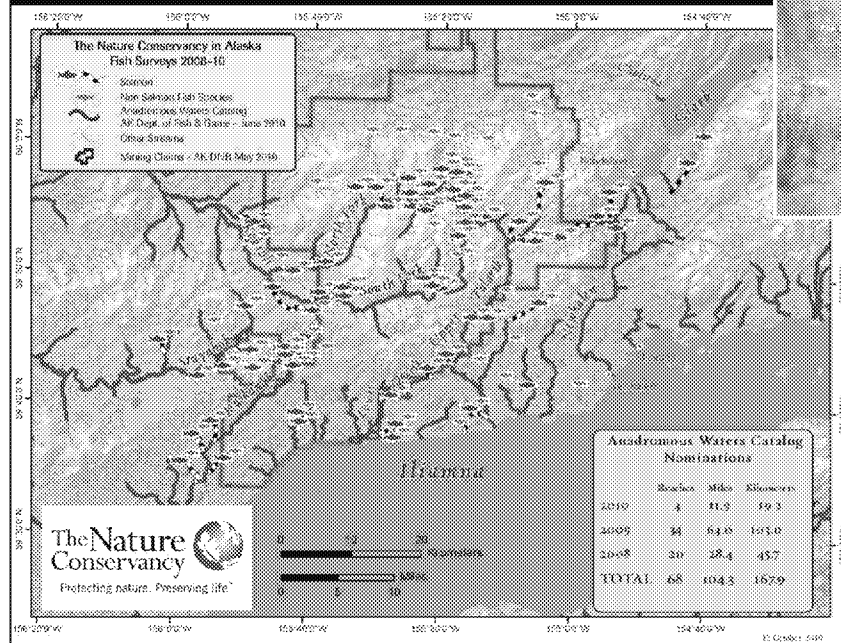
Portage Creek
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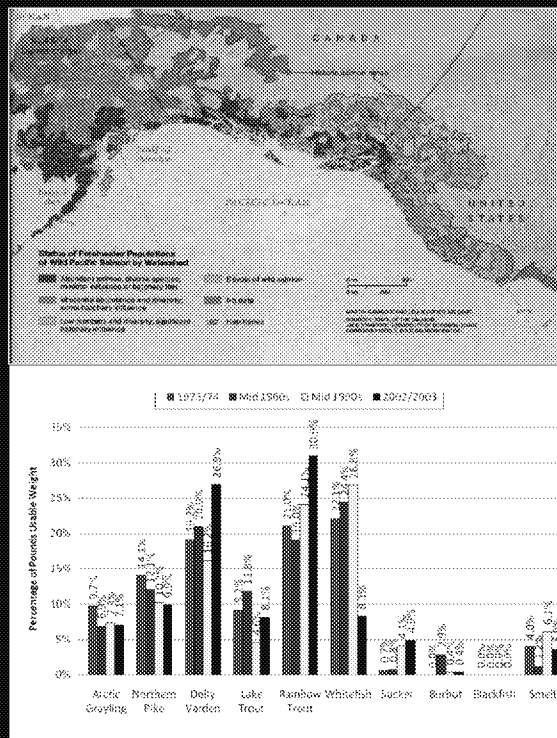
Fishery areas



Salmon found
rearing in **3 out of
every 4** streams
sampled

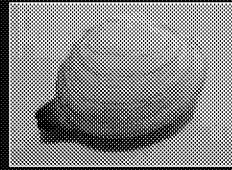
Fishery areas

- Bristol Bay supports the world's largest sockeye salmon runs
- The value of the commercial fishery often exceeds \$200 million and supports 5,540 FTE positions
- Salmon as well as other fish species comprise the most important subsistence food source for villages in the region

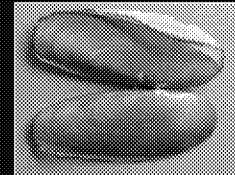


Shellfish Beds

- Critical foodweb component



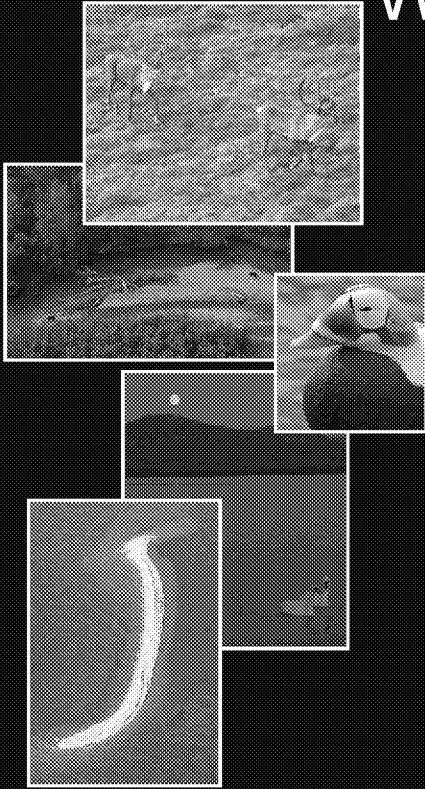
- Up to 89% of coastal village households consume an average of 25 pounds of razor and butter clams per year



- Tanner crabs have been an important commercial resources, with up to 25,000 tons harvested per year



Wildlife Areas

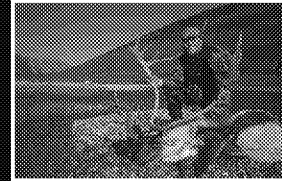
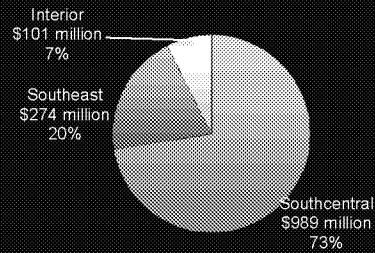


- Mulchatna and North Peninsula Caribou Herds used by >80% of region households
- Brown and black bears, moose, wolves, furbearers, and at least 36 species of small mammals
- The majority of the world population of listed Stellar's eiders migrate along Bristol Bay's coast
- 92 montane-nesting bird species, including 40 species of conservation concern
- 23 species of spring staging waterfowl
- Beluga whales, harbor porpoises, Pacific walrus
- One two documented populations of freshwater seals in the world

Recreation Areas

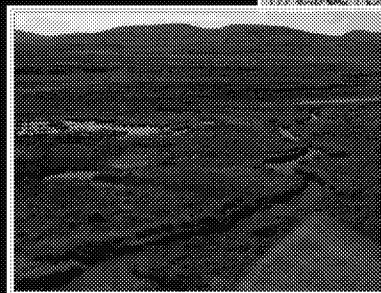
- One of Alaska's most popular sportfishing destinations
- Upper Talarik is Alaska's first designated 'Trophy Rainbow Trout Stream'
- Sport fishing, hunting and wildlife viewing generated a direct expenditure/sales of \$90.5 million in 2005
- Sport fishing generated 723 resident guide jobs in the region, and 1200 jobs overall in 2005

**SPORTFISHING
EXPENDITURES BY REGION,
ALL ANGLERS**



Site Geology / Hydrology

- Information from Pebble Limited Partnership, Northern Dynasty Minerals
 - Environmental baseline data
 - Mineral resource estimates
 - Initial Tailings Storage Facility applications
 - Applications for water rights
- USGS geochemical research
- Glacial history
- Independent reports
 - Engineering complications and concerns
 - Hydrologic analysis
 - Environmental Risk Assessment
 - Water Quality
- National Wetlands Inventory



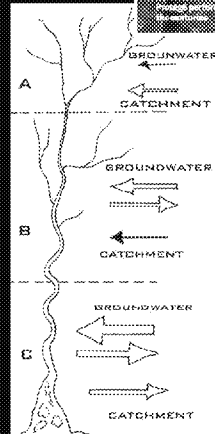
Risk Factors

- Roads and stream sedimentation
- Acid Mine Drainage
- Metals in freshwater ecosystems
- Tailings dam failure



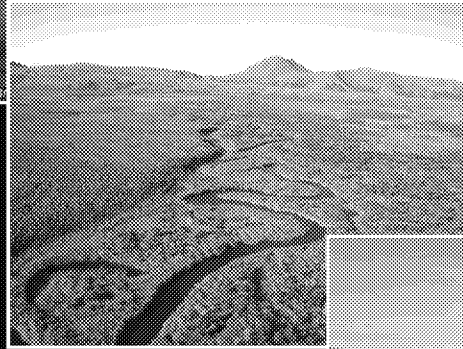
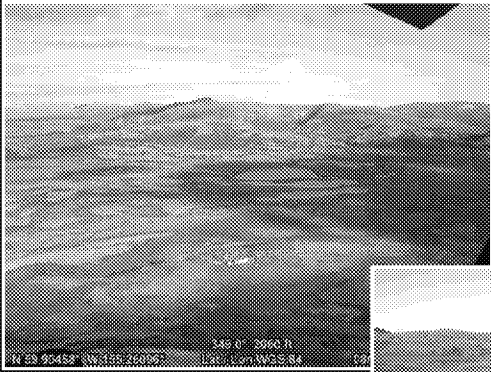
General Ecology

- Salmon as an endangered but keystone species
- Marine derived nutrients
- Importance of salmon stock diversity
- General ecological principles



Bibliography format

Questions ?



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